# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/670,760 | 09/27/2000 | Luis Felipe Cabrera | MSFT-0176/150795.1 | 6145 |

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| EXAMINER |
|---|
| THAI, HANH B |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 09/670,760 | CABRERA, LUIS FELIPE |
| | Examiner | Art Unit | |
| | Hanh B. Thai | 2163 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>amendment filed 11/2/06</u>.
2a)☐ This action is **FINAL**.      2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-23 and 25-33</u> is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-23 and 25-33</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All   b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

## DETAILED ACTION

1.      The following is Non-Final Office Action in response to amendment filed November 2,

2006 and the RCE filed March 5, 2007.

### *Response to Arguments*

2.      Applicant's arguments regarding "the cumulative backup file corresponding to a second

time allowing for the restoration of the target object without the restoration of the set of objects"

have been fully considered but they are not persuasive.

Zaremba clearly discloses differential or cumulative backup file allows for the restoration

of the target object without the restoration of the set of objects (col.5, lines 40-46 and col.8, lines

35-44, Zaremba).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which the subject matter pertains.  Patentability shall not be negatived by the
> manner in which the invention was made.

3.      Claims 1-2, 4-13, 15, 17-23, 25-30 and 32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Zaremba (U. S. Patent no. 6,647,399) of record and further view of Stevens

(U. S. Patent no. 6,145,088) of record.

Regarding claims 1 and 15, Zaremba discloses a method for generating backup files in a

computer system, comprising:

- generating a full backup file corresponding to a first time for a set of objects in the computer system (abstract; col.2, lines 26-44 and col.4, lines 8-67, Zaremba);

- generating at least one incremental file for said set of object after the first time, wherein each of the incremental file(s) is associated with the set of objects (abstract; col.2, lines 21-27 and col.4, lines 47-65, Zaremba);

- identifying a target object within said set of object for the generation of cumulative backup files (abstract; col.2, lines 38-41 and col.5, lines 40-44, Zaremba); and

- generating at least one cumulative backup file corresponding to a second time, after the first time, for the target object (abstract; col.6, line 63-col. 7, line 21 and col.8, lines 32-44, Zaremba), wherein said at least one cumulative backup file corresponding to a second time allows for the restoration of the target object without the restoration of the set of objects (col.5, lines 40-46 and col.8, lines 35-44, Zaremba).

Zaremba, however, does not disclose that the backup file is performed off-line. Stevens discloses an apparatus for remote recovery including the backup file that can be performed off-line (see col. 1, lines 49-56, Stevens). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Zaremba. The motivation of doing so would have been to provide potentially relief for data loss (column 1, lines 49-56, Stevens).

Regarding claim 2, Zaremba/Stevens combination further discloses that the generating of the at least one cumulative backup file includes analyzing at least one incremental file generated

between the first and second time (abstract; col.5, lines 40-44; col. 7, lines 5- 21 and col.8,

lines32-44, Zaremba).

Regarding claim 4, Zaremba/Stevens combination further discloses restoring the target

object to the second time by processing the full backup file and the at least one cumulative

backup file (col. 7, lines 5- 21 and col.8, lines32-44, Zaremba).

Regarding claim 5, Zaremba/Stevens combination discloses that the backup or restore the

target object the second time after the first time (abstract; col.6, line 63-col. 7, line 21 and col.8,

lines 32-44, Zaremba). Since the combination system can reconstruct the target objects the

second time (see col. 2, lines 32-49, Zaremba). It is clearly operated to reconstruct the third time

as well as many times thereafter.

Regarding claims 6-7, Zaremba/Stevens combination further discloses that the identifying

includes identifying a related subset of files as the target object for a cumulative backup file

(col.2, lines 38-41 and col.5, lines 40-44, Zaremba).

Regarding claim 8, Zaremba/Stevens combination further discloses the identifying

includes identifying a directory as the target object for a cumulative backup file (abstract; col.2,

lines 38-41 and col.5, lines 40-44, Zaremba).

Regarding claim 9, Zaremba/Stevens combination further discloses that a user identifies

the target object (col.2, line 62-col. 3, line 5, Zaremba).

Regarding claim 10, Zaremba/Stevens combination further discloses the monitoring and

analyzing restore operations in the computer system (col.2, lines 38-41 and col.5, lines 40-44,

Zaremba).

Regarding claim 11, Zaremba/Stevens combination further discloses the identifying of the target object is designed to meet a condition of bounded restore time for the target object (1, lines 15-32, Zaremba).

Regarding claim 12, Zaremba/Stevens combination further discloses controlling the frequency of generating at least one of a full, incremental and cumulative backup (abstract; col. 7, lines 5- 21 and col.8, lines32-44, Zaremba).

Regarding claim 13, Zaremba/Stevens combination further discloses a computer-readable medium having computer-executable instructions (col.3, lines 47-60, Zaremba).

Regarding claim 17, Zaremba/Stevens combination further discloses that the generating of said at least one cumulative backup file is performed off-line (see Fig. 2 and col. 1, lines 49-56, Stevens).

Regarding claim 18, Zaremba/Stevens combination further discloses the monitoring and analyzing restore operations (col. 2, lines 50-61, Zaremba).

Regarding claim 19, Zaremba/Stevens combination further discloses that the identifying of the target object is designed to meet a condition of bounded restore time (col. 2, lines 32-49, Zaremba).

Regarding claims 20-21, Zaremba/Stevens combination further the frequency of generating at least one of a full, incremental and cumulative backup (abstract; col. 7, lines 5- 21 and col.8, lines32-44, Zaremba).

Regarding claims 22 and 32, Zaremba discloses a computer system (Fig. 1) comprising:

-        a plurality of servers having at least one connection to a communications

network (see col. 3, line 46 to col. 4, line 7, Zaremba); and

-       a plurality of storage components for the storage of backup information for a

plurality of target objects in the form of full, incremental and cumulative backup

information, wherein the full and incremental backup information is associated

with the collection of said plurality of target objects (see col. 1, lines 45-49; col.

2, lines 26-61; col.4, lines 4-67; col.5, line 13 to col. 6, line 11 and col.8, lines

32-46, Zaremba), further wherein said cumulative backup information allows for

the restoration of the target object without the restoration of the set of objects

(col.5, lines 40-46 and col.8, lines 35-44, Zaremba);

Zaremba does not disclose that the backup information wherein the backup can be

performed off-line. Stevens discloses an apparatus for remote recovery including the backup file

that can be performed off-line (see Fig. 2 and col. 1, lines 49-56, Stevens). It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify Zaremba to

include the claim feature. The motivation of doing so would have been to provide potentially

relief for data loss (col. 1, lines 49-56, Stevens).

Regarding claim 23, Zaremba/Stevens combination discloses wherein the target object is

reconstructed by processing at least one cumulative backup file of the cumulative backup

information associated with said target object and a full backup file associated with the collection

of said plurality of target objects (see col. 2, lines 32-49, Zaremba).

Regarding claim 25, Zaremba/Stevens combination discloses wherein the plurality of

storage components store backup information for the target object according to a user

specification as to which subset of files comprises the target object (see col. 2, lines 31-33,

Zaremba).

Regarding claim 26, Zaremba/Stevens combination discloses that the plurality of storage components store backup information for a volume (see col. 5, lines 4-9, Zaremba).

Regarding claim 27, Zaremba/Stevens combination discloses that the plurality of storage components store backup information for a directory (see col. 6, line 63 to col. 7, line 3, Zaremba).

Regarding claim 28, Zaremba/Stevens combination discloses that at least one of the plurality of servers generates the backup information in response to monitoring and analyzing an inefficiency of a system restore operation (see col. 6, lines 4-10, Zaremba).

Regarding claim 29, Zaremba/Stevens combination discloses a condition of bounded restore time for the plurality of target objects (see 1, lines 15-32, Zaremba).

Regarding claim 30, Zaremba/Stevens combination discloses the generation of a cumulative backup file includes the analysis of at least one incremental file of the incremental backup information generated for the plurality of target objects (see col. 1, lines 45-49 and col. 2, lines 26-61, Zaremba)

4.      Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zaremba (U. S. Patent no. 6,647,399) of record in view of Stevens (U. S. Patent no. 6,145,088) of record and further in view of Fletcher et al. (U. S. Patent no. 6,038,379) of record.

Regarding claim 14, Zaremba/Stevens discloses all of the claimed limitations as discussed above, except "the storage block mappings for the target object" and "the change is stored in the format of MTF".

Fletcher discloses a data backup and restores system for computer network including the claimed feature (see col. 6, lines 10-19 and col. 8, lines 18-36, Fletcher). It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of

Zaremba and Stevens. The motivation of doing so would have been to enhance the full backup

and recovery system, for example, the capability of interchanging data between different

operating system (see col. 2, lines 14-19, Fletcher).

5.      Claims 3, 16, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Zaremba (U. S. Patent no. 6,647,399) of record in view of Stevens (U. S. Patent no. 6,145,088)

of record and further view of Pongracz et al. (U. S. Patent no. 6,073,128) of record.

Regarding claims 3, 16, 31 and 33, Zaremba/Stevens combination discloses all of the claimed

limitations as discussed above, except that at least one incremental file is performed in reverse

chronological order. Pongracz discloses a method for identifying files used to restore a file and is

performed in reverse chronological order (see col.3, lines 45-49, Pongracz). It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify Zaremba/Stevens

to include the claim feature as taught by Pongracz. The motivation of doing so would have been

to provide a properly backup file system (see col.3, lines 36-39, Pongracz).

6.      Claims 1, 15, 22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Zaremba (U. S. Patent no. 6,647,399) of record and further view of Tamer et al. (U. S. Patent no.

6,035,412).

Regarding claims 1 and 15, Zaremba discloses a method for generating backup files in a

computer system, comprising:

-       generating a full backup file corresponding to a first time for a set of objects in

        the computer system (abstract; col.2, lines 26-44 and col.4, lines 8-67,

        Zaremba);

-       generating at least one incremental file for said set of object after the first time,

wherein each of the incremental file(s) is associated with the set of objects

(abstract; col.2, lines 21-27 and col.4, lines 47-65, Zaremba);

-       identifying a target object within said set of object for the generation of

cumulative backup files (abstract; col.2, lines 38-41 and col.5, lines 40-44,

Zaremba); and

-       generating at least one cumulative backup file corresponding to a second time,

after the first time, for the target object (abstract; col.6, line 63-col. 7, line 21

and col.8, lines 32-44, Zaremba), wherein said at least one cumulative backup

file corresponding to a second time allows for the restoration of the target object

without the restoration of the set of objects (col.5, lines 40-46 and col.8, lines

35-44, Zaremba).

Zaremba, however, does not disclose that the backup file is performed off-line. Tamer

discloses RDF-based and MMF-based backups including that the file can be performed off-line

and the restoration of the target object without the restoration of the set of objects (see col. 11,

line 59 to col. 12, line 8, Tamer). It would have been obvious to one of ordinary skill in the art at

the time of the invention to modify Zaremba. The motivation of doing so would have been to

make fast partial and complete database restores possible (column 3, lines 38-40, Tamer).

Regarding claims 22 and 32, Zaremba discloses a computer system (Fig. 1) comprising:

-       a plurality of servers having at least one connection to a communications

network (see col. 3, line 46 to col. 4, line 7, Zaremba); and

- a plurality of storage components for the storage of backup information for a

plurality of target objects in the form of full, incremental and cumulative backup

information, wherein the full and incremental backup information is associated

with the collection of said plurality of target objects (see col. 1, lines 45-49; col.

2, lines 26-61; col.4, lines 4-67; col.5, line 13 to col. 6, line 11 and col.8, lines

32-46, Zaremba), further wherein said cumulative backup information allows for

the restoration of the target object without the restoration of the set of objects

(col.5, lines 40-46 and col.8, lines 35-44, Zaremba);

Zaremba, however, does not disclose that the backup file is performed off-line. Tamer

discloses RDF-based and MMF-based backups including that the file can be performed off-line

and the restoration of the target object without the restoration of the set of objects (see col. 11,

line 59 to col. 12, line 8, Tamer). It would have been obvious to one of ordinary skill in the art at

the time of the invention to modify Zaremba. The motivation of doing so would have been to

make fast partial and complete database restores possible (column 3, lines 38-40, Tamer).

### *Conclusion*

7.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hanh B. Thai whose telephone number is 571-272-4029. The

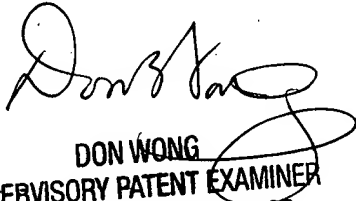examiner can normally be reached on Mon-Thur (7:00AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system.  Status information for published applications

may be obtained from either Private PAIR or Public PAIR.  Status information for unpublished

applications is available through Private PAIR only.  For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hanh B Thai
Examiner
Art Unit 2163

June 6, 2007

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